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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/529,440	04/13/2000	TOMOKAZU HAMADA	2153-107	7138

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EXAMINER

HOANG, THAI D.

ART UNIT PAPER NUMBER

2667

DATE MAILED: 12/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/529,440

Applicant(s)

HAMADA ET AL.

Examiner

Thai D Hoang

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

In view of Applicant's argument and the presentation of claims 16-17, the restriction requirement in the previous Office Action has been withdrawn. All claims 1-17 are now pending and are examined on the merit.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2, 7, 11 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not discuss or define "a predetermined time slot".

Therefore, the specification does not disclose to support the limitation "*when interference is detected in a predetermined time slot received from a subscriber station, said interference time slot information is registered into said interference time slot database*" as recited in claims 1-2, 7, 11 and 15.

Claims 16-17, 8-10 and 12-14 are rejected because they depend on rejected claims 1, 7 and 11 respectively.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-2 and 4-6 are rejected under 35 U.S.C. 102(e) as being unpatentable over Andersson et al, US Patent No. 6,240,125 B1, hereafter referred to as Andersson.

Regarding claims 1, 2 and 5, as best understood, Andersson discloses a method and means for frequency hopping in a FDMA or TDMA or CDMA radio communication system; col. 4, lines 61-64. Andersson teaches that the system comprises a base station communicates with a plurality of mobile stations. The system measures interference of channels with respect to uplink connections and with respect to downlink connections. The measured interference values are then stored in an interference list for each of the connections in the base station of the radio communications system; fig. 2, abstract, col. 3, lines 6-22 (an interference time slot database for registering/storing

Art Unit: 2667

thereinto a communication time slot in which interference happens to occur). Andersson discloses that the base station has a control unit (figs. 4b and 4d) to measure and reallocate channel/timeslot for uplink and downlink to the respective mobile station according to the interference information of the channel/timeslot stored in the database; col. 6, lines 11-30; lines 54-57; col. 6, line 65-col. 7, line 3 (a TDMA control unit for executing reallocation/rearrangement of time slots communicating with the respective subscriber stations in response to a change in a traffic based upon the interference time slot information of the interference time slot database; wherein when interference is detected in a predetermined time slot received from a subscriber station, said interference time slot information is registered into said interference time slot database; the time slot reallocation/rearrangement are carried out based upon registered information of said interference time slot database; and also time slot reallocation/rearrangement information is transmitted to the respective subscriber stations)

Regarding claim 4, in figs. 4b-d and 5a-b, Andersson shows that the timeslots in a time frame are changed when the base station allocates timeslot for each mobile station corresponding to the interference information stored in the list; col. 6, lines 11-30; lines 54-57; col. 6, line 65-col. 7, line 3 (time slot allocations/arrangements of the respective subscriber stations are changed all at once every super frame of a TDMA frame, and wherein a base station transmits to the respective subscriber stations, subsequent time slot reallocation/rearrangement information with different time slot arrangements in a plurality of frames within a super frame period.)

Art Unit: 2667

Regarding claim 6, Andersson discloses that the system reallocates timeslot channels for each sector; fig. 5, lines 41-49 (the interference time slot database manages the interference time slot information every sector)

Allowable Subject Matter

Claim 3 is allowed.

Andersson et al, US Patent No. 6,240,125 B1 disclose a method and means for frequency hopping in a FDMA or TDMA or CDMA radio communication system. The independent claim 3 of the present application recites:

A TDMA wireless communication system in which a base station wireless communicates with a plurality of subscriber stations by an up-stream line TDMA system and a down-stream line TDM system; wherein the base station comprises: an interference time slot database and a TDMA control unit for executing reallocation/rearrangement of time slots communicating with the respective subscriber stations wherein each of the subscriber stations monitors as to whether or not there is the up-stream TDMA time slot reallocation/rearrangement information addressed to the own subscriber station, when the up-stream TDMA time slot reallocation/rearrangement information cannot be received, the subscriber station judges an occurrence of interference and transmits said occurrence of interference to the base station as recited in claim 3.

Andersson et al do not teach or fairly suggest the features as shown above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to the application:

US Patent No. 6,298,081 B1, Almgren et al. disclose a method of Channel hopping in a radio communications system.

US Patent No. 5,937,002 A, Andersson et al. disclose a method of Channel hopping in a radio communication system.

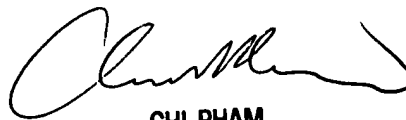
US Patent No. 5,778,318 A, Talaro et al. disclose a method for allocating channels in a radio system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D Hoang whose telephone number is (703) 305-3232. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Thai Hoang


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 11/28/03